Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

For any questions, you can email us directly:
sales@integrated-circuit.com

EIS

PRODUCT INFORMATION

SHARP

BLUE STREAK
Powering Tomorrow's Vision

SHARP's New Line
of MCUs and
System-on-Chips

LH75400 16/32-bit Microcontroller with Grayscale LCD Controller
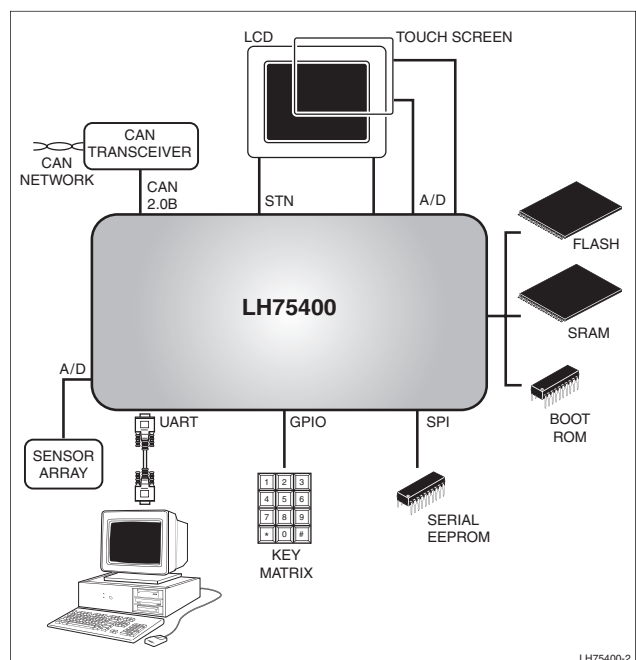
FEATURES

- ARM7TDMI-S™ Core
- High Performance (Up to 90 MHz)
  - Internal PLL-driven or External Clock
- 32KB On-chip SRAM
  - 16KB TCM (0 Wait State) SRAM
  - 16 KB Internal SRAM
- Clock and Power Management
  - Low Power Modes: Standby, Sleep, Stop1, Stop2
- Grayscale LCD Controller
  - 4-bit (16 level) Grayscale
    - Up to XGA (1,024 × 768)
  - Supports STN Displays
- Eight channel, 10-bit A/D Converter
- Four DMA Channels
- Integrated Touch Screen Controller
- Serial Interfaces
  - 3 × UARTs
  - SSP
- Full-featured Real Time Clock (RTC)
  - Operates from 32 kHz XTAL
- CAN Version 2.0b*
- Three 16-bit Counter/Timers with Capture/Compare/PWM Capability
- Watchdog Timer
- Low Voltage Detector
- JTAG Debug Interface and Boundary Scan
- 3.3 V Operating Voltage
- -40°C to +85°C Operating Temperature
- 144-pin LQFP Package

*Controller Area Network (CAN)

DESCRIPTION

The LH75400 is a low cost microcontroller that utilizes the ARM7TDMI-S core integrated with a wide variety of functions including the capability to control black and white and grayscale LCD displays with up to 16 levels of gray. Other functions include: 32KB of on-chip SRAM, three UARTs, SSP, CAN version 2.0b, three 16-bit Counter/Timers, Analog to Digital Converter with integrated touch screen controller, Watchdog Timer, and Low Voltage Detector. The LH75400 operates up to 90 MHz at 3.3 V over the industrial temperature range of -40°C to +85°C and is offered in a 144-pin LQFP package.
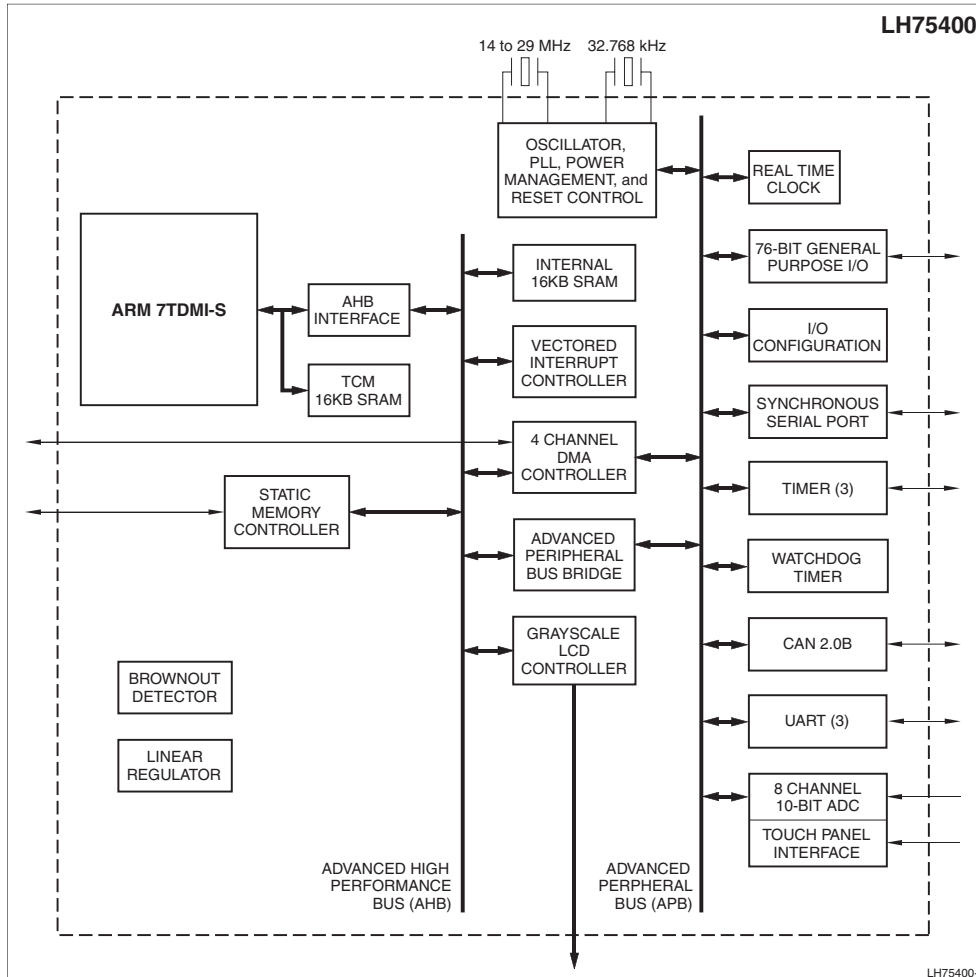
SYSTEM APPLICATION EXAMPLE

LH75400-2

PRODUCT INFORMATION

SHARP

LH75400 BLOCK DIAGRAM

LH75400

14 to 29 MHz   32.768 kHz

OSCILLATOR, PLL, POWER MANAGEMENT, and RESET CONTROL

REAL TIME CLOCK

ARM 7TDMI-S

AHB INTERFACE

TCM 16KB SRAM

INTERNAL 16KB SRAM

VECTORED INTERRUPT CONTROLLER

4 CHANNEL DMA CONTROLLER

STATIC MEMORY CONTROLLER

ADVANCED PERIPHERAL BUS BRIDGE

GRAYSCALE LCD CONTROLLER

BROWNOUT DETECTOR

LINEAR REGULATOR

76-BIT GENERAL PURPOSE I/O

I/O CONFIGURATION

SYNCHRONOUS SERIAL PORT

TIMER (3)

WATCHDOG TIMER

CAN 2.0B

UART (3)

8 CHANNEL 10-BIT ADC

TOUCH PANEL INTERFACE

ADVANCED HIGH PERFORMANCE BUS (AHB)

ADVANCED PERPHERAL BUS (APB)

LH75400-1

SHARP

MICROELECTRONICS OF THE AMERICAS

Regional Sales Offices

North American Headquarters
Camas, WA
Ph (360) 834-2500
Fax (360) 834-8903

West
Huntington Beach, CA
Ph (714) 903-4600
Fax (714) 903-0295

San Diego, CA
Ph (858) 597-0982
Fax (858) 597-8701

San Jose, CA
Ph (408) 436-4900
Fax (408) 436-0924

East
Ft. Lauderdale, FL
Ph (954) 267-8883
Fax (954) 267-0254

Burlington, MA
Ph (781) 270-7979
Fax (781) 229-9117

Carey, NC
Ph (919) 460-0695
Fax (919) 460-0795

Pittsburgh, PA
Ph (412) 381-1191
Fax (412) 381-1192

Yardley, PA
Ph (215) 321-5530
Fax (215) 321-5534

Central
Schaumburg, IL
Ph (847) 925-9150
Fax (847) 925-9172

Troy, MI
Ph (248) 458-1527
Fax (248) 391-6165

Austin, TX
Ph (512) 349-7262
Fax (512) 349-7002

Irving, TX
Ph (972) 582-1712
Fax (972) 580-7537

Houston, TX
Ph (281) 955-9909
Fax (281) 955-9910

Muskego, WI
Ph (414) 529-9568
Fax (414) 529-9569

Europe
SHARP Microelectronics Europe
Hamburg, Germany
Ph (49) 40-2376-2286
Fax (49) 40-2376-2232

Asia
SHARP Corporation
Osaka, Japan
Ph (81) 6-6621-1221
Fax (81) 6117-725300

Product Information: 1-800-642-0261
World Wide Website: http://www.sharpsma.com

BLUE STREAK
Powering Tomorrow's Vision